

Method and Structure for Isolating Substrate Noise

ABSTRACT OF THE DISCLOSURE

An integrated circuit structure for isolating substrate noise and a method of forming the same are provided. In the preferred embodiment of the present invention, a semi-insulating region is formed using proton bombardment in a substrate between a first circuit region and a second circuit region. Two guard rings are formed along the semi-insulating region, each on a side. A backside semi-insulating region is formed through proton bombardment from the back surface of the substrate into the substrate. The backside semi-insulating region is preferably connected with the semi-insulating region. A grounded guard layer is preferably formed on the backside semi-insulating region.

Figure 8